Improvement of Usability Issues in WAP

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ABSTRACT

This master's thesis considers study on the usability issues in the WAP application and it focused on the navigating aspect. The thesis is a theory-testing research consisting of two parts. The first part forms the frame of reference for the empirical theory-testing experiment. By reading the conceptual theoretical background research one can form a general picture of the current usability in the WAP applications and the recent research considering navigation structures in mobile environment. The second part of this thesis describes the controlled experiment, which is a comparative usability testing of two different WAP applications. The purpose was to improve the usability issues in the WAP application and discover, whether the placing of the links or select down button has an impact on the usability of WAP applications. Also, the effects of the possibility to cross-navigate were tested. When analyzing the results, it was noticed that select down button technique created more speed to navigate and reduced a lot of complexity in the WAP applications. The first WAP application, where navigation is list of links, suffered from severe usability problems. The second WAP application, where navigation happened through select down button and paging technique, is preferable in all evaluated aspects: learnability, errors, efficiency of use, subjective satisfaction and the user's awareness of her/his current position in the application. The results are exploitable in the WAP application development in general, and especially when considering the further development of Islamic digital library, benefits from the results, when generating their guidelines for mobile application developers.

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CHAPTER 1

INTRODUCTION

1.0 Introduction

According to ITU Secretary-General the worldwide mobile cellular subscribers have been reached the 4 billion at the end of the year 2008. Since the turn of the century, the growth of mobile cellular subscribers has been impressive, with year-on-year growth averaging 24 percent between 2000 and 2008 (ITU, 2008).

This massive number of the mobile subscribers produced much excitement to increase the services offered by mobile which could satisfy those subscribers and make their life easier. The mobile industry has worked hard to generate services to meet the requirements of the users, for instance Internet (WAP), commerce, GPS, m-learning, and many other services.

The Wireless Application Protocol (WAP) is the de facto standard for providing Internet communications and advanced telephony-based services over digital mobile telephones, pagers, personal digital assistants (PDAs), and other wireless terminals. One of the most important aspects in the WAP its capability for bringing the power of communication and the Internet into the hands of users while overcoming temporal and spatial constraints. The WAP is a completely new concept which provides data oriented services to the mass market and is capable of being beneficial to far more end users than the personal computer.

Regrettably most of the current WAP services have low and miserable usability (Chincholle et al. 2002a), usability is critical factor for such service otherwise the service will not be useful for user. The usability tells us how well the users can use the system productively, effectively and pleasantly to reach the defined goals in a certain environment. In this study, usability of WAP applications will be studied on the navigation among cards.

The contents of the thesis is for internal user only

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